

PATENT

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Christina M. Padamonsky

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re patent application of:

Applicant(s): Khoi Phan, *et al.*

Serial No: 09/553,841

Filing Date: April 21, 2000

Examiner: Erick J. Rekstad

Art Unit: 2613

Title: SYSTEM AND METHOD FOR VISUALLY MONITORING A SEMICONDUCTOR  
PROCESSING SYSTEM

Mail Stop Appeal Brief-Patents  
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P.O. Box 1450  
Alexandria, VA 22313-1450

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**REPLY BRIEF**

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Dear Sir:

Applicants' representative submits this Reply Brief in response to the Examiner's Answer dated April 8, 2005. A Request for Oral Hearing and a credit card payment form are filed concurrently herewith, wherein the credit card payment form is believed to cover all fees due regarding this document and the Request for Oral Hearing. In the event any additional fees may be due and/or are not covered by the credit card, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1063 [AMDP468US].

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REMARKS

Claims 1-23 are currently pending and are presently under consideration. The Examiner's Answer incorrectly states that the claims stand or fall together because there is no statement in the Appeal Brief to the contrary. However, the Appeal Brief was filed after the effective date of 37 C.F.R. § 41.37 which removed the requirement of the separate grouping of claims section. The Appeal Brief argued the claims separately, which satisfies the requirement of 37 C.F.R. §41.37(c)(1)(vii) and the claims do not stand or fall together.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments herein. In particular, the following comments address deficiencies contended in the Examiner's Answer to applicants' Appeal Brief.

**I. Regarding the Rejection of Claims 1-3, 5-7, 10-12 and 15-23 Under 35 U.S.C. §103(a)**

The Examiner incorrectly maintains the rejection of claims 1-3, 5-7, 10-12 and 15-23 under 35 U.S.C. §103(a) as being unpatentable over Sanada (U.S. 5,843,527) in view of Ogata (U.S. 6,313,903). It is respectfully submitted that the assertions brought forth in the Final Office Action and the Examiner's Answer are incorrect in view of at least the reasons set forth below as well as in applicants' Appeal Brief. Neither Sanada nor Ogata, alone or in combination, teach or suggest all limitations as recited in the subject claims.

**Independent claim 1:**

Claim 1 (from which claims 2-3, 5-7 and 10-12 depend) recites *a system that visually monitors semiconductor processing, comprising a develop chamber and an image collector...located at least partially within the develop chamber, the image container collects energy reflected from inside the develop chamber and transmits a signal indicative of interior of the chamber.* The Examiner's Answer incorrectly contends that claim 1 is silent regarding that the energy obtained by the image collector is related to the developing process. As claimed, the image collector is located at least partially within the *develop chamber* and collects energy reflected from inside the *develop chamber*. Therefore, the image collector is obtaining energy relating to the developing process.

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It is conceded that Sanada does not teach or suggest a develop chamber and Ogata is relied upon to overcome the deficiencies of Sanada. Ogata discloses a resist coating and developing unit but is silent regarding a system that visually monitors semiconductor processing and an image container that collects energy reflected from inside the develop chamber and transmits a signal indicative of interior of the chamber. Thus, Ogata does not contemplate monitoring a develop process and there is no teaching, suggestion, nor motivation to combine Ogata with Sanada to render obvious applicants' claimed invention.

Independent claim 15:

Claim 15 (from which claims 16-18 depend) recites *a system that visually monitors an internal part of a semiconductor processing system, comprising an imaging means for collecting images of an interior of an enclosed developer and providing an image signal indicative of a visual representation of the interior of the developer...* The imaging means can be an *image collector located at least partially within a develop chamber* as disclosed in Applicants' specification. Neither Sanada nor Ogata teach or suggest such features. It is conceded that Sanada does not disclose a develop chamber and Ogata is relied upon to overcome the deficiencies of Sanada. However, Sanada relates to visually monitoring a coating process and Ogata does not contemplate monitoring a develop process. Further, the imaging means collects images of an interior of an enclosed developer, and, therefore, is related to the developing process, which is neither taught nor suggested by the cited references. Therefore, there is no teaching, suggestion, or motivation to combine the cited references and, Sanada in view of Ogata does not make obvious the subject claims.

Independent claim 19:

Claim 19 (from which claims 20-23 depend) recites *a method for visually monitoring an interior of an enclosed developing chamber in a semiconductor processing system, comprising collecting visual images of the interior of a chamber and providing an image signal indicative thereof, and displaying a visual representation of the interior of the enclosed chamber based on the image signal.* The enclosed chamber is a developing chamber and the visual images collected are of the interior of the enclosed developing chamber. Neither Sanada nor Ogata, alone or in combination, teach or even suggest a developing chamber or collecting visual images

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of the interior of a developing chamber. Thus, the purported combination does not render the claims obvious.

**II. Regarding the Rejection of Claims 4, 8, 9, 13 and 14 Under 35 U.S.C. §103(a)**

The Examiner incorrectly maintains the rejection of claims 4, 8, 9, 13 and 14 under U.S.C. §103(a) as being unpatentable over Sanada and Ogata as applied to claims 1, 2 and 7 above, and further in view of Stern, *et al.* (U.S. 6,603,874). It is respectfully submitted that the assertions brought forth in the Final Office Action and the Examiner's Answer are incorrect in view of at least the reasons set forth below as well as in applicants' Appeal Brief. The cited references do not teach or suggest all limitations as recited in the subject claims.

The subject claims depend from independent claim 1. As discussed *supra*, neither Sanada nor Ogata teach or suggest all limitations of claim 1. Specifically, Sanada does not teach or suggest a develop chamber, as conceded, and Ogata is relied upon to overcome the deficiencies of Sanada. Ogata discloses a resist coating and developing unit but is silent regarding a system that visually monitors semiconductor processing and an image container that collects energy reflected from inside the develop chamber and transmits a signal indicative of interior of the chamber. Moreover, Ogata does not contemplate monitoring a develop process.

Stern *et al.* in combination with Sanada and Ogata does not overcome the above-mentioned deficiencies. Stern *et al.* relates to imaging but is silent regarding a develop chamber, a system that visually monitors semiconductor processing and an image container that collects energy reflected from inside the develop chamber and transmits a signal indicative of interior of the chamber. Therefore, the purported combination does not render the claims obvious.

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**III. Conclusion**

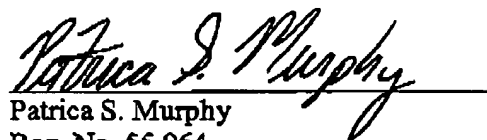
The subject application is believed to be in condition for allowance in view of the above comments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [AMDP468US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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